Amendments to the Specification

Please amend the paragraph beginning on page 21, line 3, as follows:

If fabricating a liquid crystal display element using glass substrates, or the like, firstly, spacer granules are scattered over the inner surface of the substrates forming the cell interior 32. Thereupon, the first and second substrates are registered in mutually opposing positions. Next, prior to combining or connecting or laminating the first and second substrates 10 and 12, a liquid crystal medium is introduced to the inner surface of the substrate forming the cell interior 32 of the second substrate 12, by means of a liquid crystal introducing device (not illustrated). Thereupon, the respective processes employed in the present invention for introducing spacers between the substrates, determining the cell gap, hardening the sealant material, and withdrawing the spacers, are carried out. The present embodiment is particularly suitable for application to a liquid crystal manufacture process including a so-called "pre-connection injection" step, which is predicted to become the most common process for liquid crystal manufacture in the future. However, needless to say, it may also be applied suitably to a conventional substrate connecting process wherein e the liquid crystal medium is injected after connecting the first and second substrates.

Please amend the paragraph beginning on page 27, line 18, as f llows:

According to this composition, in the manufacturing process for an organic EL panel, wherein the materials used in the manufacturing process are sensitive to moisture and oxygen, it is possible to eliminate these factors which have a significant effect on the quality of the panel, whilst also being able to control the cell gap accurately by means of a simple process. Moreover, since it is not necessary to place the sealant material in such a manner that an opening for an air is provided, as in the prior art, then it is possible to reduce ~~labour~~ labor and costs relating to the quality control of the manufactured panel. Since the sealing characteristics of the panel itself are enhanced, this contributes to increased display quality and product lifespan.

Please amend the paragraph beginning on page 28, line 8, as follows:

This embodiment is described here with reference to Figs. 3(A) and 3(B). Similarly to the case of the second embodiment, inside the processing chamber 40, spacers 20 have previously been installed on the spacer operating mechanism 22. A first substrate 10 is aligned in position with a second substrate 12 whereon sealant material 14 is disposed so as to form a waste region 30 in the area to the inside of the edges of the first substrate 10 and

second substrate 12, and the substrates are held. Thereupon, a processing chamber 40 comprising a first surface table 42 and second surface table 44 is reduced from normal pressure to a vacuum by sucking out the air using a processing chamber vacuum pump 52 connected to a processing chamber exhaust outlet 48 via piping comprising a pressure regulating valve (not illustrated). Thereupon, spacers 20 having a thickness substantially equal to a prescribed cell gap d are inserted into the waste region 30 between the first substrate 10 and the second substrate 12.

Please amend the paragraph beginning on page 29, line 10, as follows:

In this modification, a process wherein the expected cell interior space and the remaining space of the processing chamber are maintained so as to have a substantially equal pressure whilst being returned to normal pressure is added for the following reason. If air is introduced suddenly into the processing chamber 40, a large pressure difference will arise between the expected cell interior space and the remaining space of the processing chamber. If the interval between the substrates is sealed whilst this pressure differential remains, the substrate will deform and hence the cell gap d will, for instance, be different between the ~~centre~~ center region and the perimeter region of the cell. Consequently, reverting to normal pressure without creating

a pressure difference serves to prevent the occurrence of deformation of the substrates.

Please amend the paragraph beginning on page 30, line 12, as follows:

Moreover, in the compositional example shown in Figs. 3(A) and 3(B), during the processing from the positional alignment of the first substrate 10 and the second substrate 12 until the sealant material has completely hardened, the first substrate 10 and the second substrate 12 are respectively sealed and held by the first surface table 42 and the second surface table 44. The sealing between the substrates and the surface tables is achieved between the respective outer faces of the substrates on the other sides thereof to the mutually opposing inner faces of the respective substrates, and respective contact faces of the surface tables 42 and 44 respectively opposing the aforementioned outer faces. In order to achieve a hermetic seal, the substrates are vacuum suctioned by evacuating air by a vacuum exhaust system including a substrate holding vacuum pump 50, from substrate holding evacuation holes 46 provided in the surface tables 42 and 44, via piping provided with a pressure regulating valve (not illustrated). These substrate holding evacuation holes 46 are vacuum exhaust holes for suction holding the first and second substrates 10 and 12, respectively.

Please amend the paragraph beginning on page 33, line 1, as follows:

These spacers elements 20a, 20b, 20c are inserted in a layered state between the substrates. As ~~state~~ stated previously, after the sealant has hardened, the cell gap d is maintained as a uniform value. Therefore, after hardening of the sealant, the spacer element positioned in the middle of the spacer obtained by layering of the spacer elements can be withdrawn without affecting the cell gap d.

Please amend the paragraph beginning on page 33, line 23, as follows:

Here, the spacer elements supporting the substrates during the process of withdrawing a portion of the spacer elements are not limited to one spacer element, but rather, the substrates may also be supported by two, three or more spacer elements. Moreover, the same applies to the number of spacer elements positioned in substantially the middle region. Therefore, "positioned substantially in the middle region" does not necessarily mean only the spacer element containing the ~~centre~~ center line of the whole set of spacers, but may also include any other spacer elements that are not contacting and supporting the upper or lower substrates.

Please amend the paragraph beginning on page 35, line 26, as follows:

Figs. 5(A) and 5(B) are approximate diagrams showing ~~a modification~~ an example of a modification of the third embodiment of this invention. The plan diagram viewing the substrates from above is substantially the same as Fig. 1(A) and is omitted.

Please amend the paragraph beginning on page 36, line 3, as follows:

Describing this embodiment with reference to Figs. 5(A) and (B), a spacer with auxiliary spacer is used, wherein an auxiliary spacer element 21 is appended to a spacer having a thickness substantially equal to the prescribed cell gap d. If the thickness of the auxiliary spacer element 21 is taken as H, for example, then when the spacer with auxiliary spacer is inserted ~~inbetween~~ in between the substrates, a substrate interval which is greater than the prescribed cell gap d, namely, an interval of d + H, is maintained. Thereupon, the auxiliary spacer element 21 is withdrawn before the sealant 14 hardens, and the substrates are pressed to make fine adjustments so that the prescribed cell gap d is achieved. Subsequently, the sealant 14 hardens and the cell gap is controlled.

Please amend the paragraph beginning on page 40, line 12, as follows:

As described above, if the sealant material is an ultraviolet-setting material, then the first surface table and/or second surface table should be a quartz table, and ultraviolet light irradiating apparatus should be provided.

(2) Description of ~~Connecing~~ Connecting Device

A compositional example of a device for implementing the foregoing method is described below.

Please amend the paragraph beginning on page 42, line 18, as follows:

Moreover, according to the laminating device corresponding to Fig. 3 of the present invention, desirably, processing chamber defining means 58 for defining a processing chamber 40 for connecting or combining or laminating, and pressure adjusting means 62 for freely altering the pressure of the processing chamber 40 from normal pressure to vacuum pressure or from vacuum pressure to normal pressure, are provided. In the present example, the processing chamber defining means 58 is principally constituted by the first and second surface tables 42 and 44. In this way, the entire structure of the device can be ~~compactified~~ made more compact by forming the processing chamber 40 by means of the surface tables 42 and 44.

Please amend the paragraph beginning on page 44, line 14, as follows:

Figs. 6(A) and (B) are approximate diagrams showing a fourth embodiment of the present invention, depicting a cross- section containing substrates and spacers in a connecting device. The plan diagram viewing the substrates from above is substantially the same as Fig. 1(A) and is omitted here.

Please amend the paragraph beginning on page 44, line 20, as follows:

Describing this embodiment with reference to Figs. 6(A) and (B), the device according to this fourth embodiment of the present invention comprises a wedge shaped spacers 24 having a thickness which decreases towards the tip, on the ends thereof which are inserted between the substrates 10 and 12.

Please amend the paragraph beginning on page 46, line 1, as follows:

(Fifth Embodiment)

Fig. 7 and Fig. 8 are approximate diagrams for describing a fifth embodiment of the present invention. Figs. 7(A) and 7(B) illustrate a cross-section of the substrates and spacers inside the connecting device. Fig. 7(C) is an approximate diagram of a cross-section for describing the independent operating state of a rotating head section 26a.

Please amend the paragraph beginning on page 46, line 8, as follows:

Fig. 8(A) is an approximate plan diagram viewing a variable thickness spacer 26 corresponding to Fig. 7(A) from above, and similarly, Fig. 8(B) is an approximate plan diagram viewing a variable thickness spacer 26 corresponding to Fig. 7(B) from above. Line C-C in Fig. 8(A) and Fig. 8(B) is the line used to obtain the cross-sections in Fig. 7(A) and 7(B).

Please amend the paragraph beginning on page 46, line 15, as follows:

According to the device relating to this embodiment, the variable thickness spacer 26 comprises a rotating head section 26a constructed to have a smooth elliptical vertical section. This rotating head section 26a is composed such that it rotates about a suitable point on the interior or surface thereof. In the compositional example shown in Fig. 7(A) and 7(B), the rotating head section 26a has an elliptical bar shape or rotating elliptical bar shape. Moreover, the rotating head section 26a is composed in such a manner that it turns about the long axis or short axis, taking the origins of the long axis or short axis of the ellipse as the ~~centre~~ center of rotation.

Please amend the paragraph beginning on page 47, line 13, as follows:

Here, "vertical section" means a cross section along dotted line C-C running from top to bottom, wherein the rotating head section 26a of the variable thickness spacer 26 is on the upper side of the spacer, as illustrated in Fig. 8(A) and Fig. 8(B).

Please amend the paragraph beginning on page 49, line 7, as follows:

The multiple-yield substrate used here comprises square glass substrates of 400 mm x 400 mm, for example. 80 individual cells (or display regions (windows)) are fabricated from these connected substrates, for example. Representative cells are indicated by numeral 70. The respective cell regions are surrounded by sealant material segments arranged in a lattice shape. Representative sealant material segments are indicated by numeral 72. In this example, the cells are rectangular in shape, having longer edges of 34.54 mm and shorter edges of 25.91 mm. The cells are, for example, arranged in a matrix of 8 rows by 10 columns, in such a manner that the ~~centre-to-centre~~ center-to-center interval between adjacently positioned cells is 40 mm in both the row direction and the column direction.